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been found in the triassic red sandstone of Prince Edward's Island, have the same form as those of *Megalosaurus*, *Dinodon* and *Lælaps*. But here, so far as we have the corresponding parts for comparison, the resemblance ceases. The remarkable depth of the dentary bone in relation with its length in *Bathygnathus*, indicates a form of head very different from that of *Megalosaurus* and its American representatives. It was this unusual relation of depth to breadth which led me to suspect a form of head more in accordance with that of the skeleton of an upright animal, and led me to ask the question, "was this animal probably not one of the bipeds which made the so-called bird tracks of the New Red Sandstone of the valley of the Connecticut?" (See Jour. Ac. Nat. Sc. 1854, 329)

Subsequently, in examining the remains of *Hadrosaurus*, the American representative of *Iguanodon*, from the great disproportion between the fore and hind parts of the body, I was led "to suspect that this great herbivorous lizard sustained itself in a semi-erect position on the huge hinder extremities and tail, while it browsed on plants growing upon the shores of the ocean." (Cret. Rept. of the U. S. 1865, 97.)

The remains referred to *Lælaps* exhibit even a far greater disproportion between the fore and hind limbs than in *Hadrosaurus*, which, together with its long bird-like claws, etc., suggested to Prof. Cope a similar position of body to that of *Hadrosaurus*, and a use of the hind limbs in attack upon the prey of the animal analagous with that in the eagle (Pr. A. N. S. 1866, 279). The extraordinary disproportion between the fore and hind limbs of *Lælaps*, which appears to me so closely related with *Megalosaurus*, leads me to suspect that the remains described by Buckland, Cuvier, Owen and others, and attributed to the shoulder of *M. Bucklandi*, perhaps, at least in part, belong to the pelvis, if they in whole or part do not belong to other animals. Had the humerus of *Lælaps* been found isolated, I never would have thought of associating it in the same skeleton with the huge bones of the hinder extremity of that animal. Perhaps, when this great disproportion comes to be known, it may be discovered that there exist specimens of remains of the fore limbs of *Megalosaurus*, from the Wealden, in the British or other museums of England, which heretofore have excited no suspicion as to their true relations.

Teratosaurus, from the upper Keuper, in the vicinity of Stuttgart, described by Meyer (Palæontographica, 1859–61, 258), approached *Bathygnathus* most in the proportions of its face, as well as resembled it in the form of the teeth, but the fossil dentary bone of the latter is even still shorter and deeper than would relate to the fossil maxillary of the former.

Remarks on CONOSAURUS of Gibbes.

BY JOSEPH LEIDY, M. D.

In a memoir on *Mosasaurus* and the allied genera, by Dr. R. W. Gibbes, published in the second volume of the Smithsonian Contributions to Knowledge, the author described some teeth from the eocene formation of Ashley River, South Carolina, which, from their general resemblance with those of *Mosasaurus*, both in form and conjunction with osseous bases, he referred to a reptile with the name of *Conosaurus Bowmani.*

An examination of the structure of these teeth proved to me that they belonged to a fish. The body of the crown is composed of a compact vasodentine, invested, in place of enamel, with a thin layer of ordinary dentine. There is no pulp cavity in the interior; and in the complete teeth, the crown is continuous with a robust osseous fang, resembling in general appearance that of the teeth of *Mosasaurus*.

A short time since Prof. F. S. Holmes submitted to my examination the dentary bone of *Conosaurus*, imbedded in a block of white eocene marl, from the vicinity of Charleston, South Carolina. The specimen fully confirms the view that the animal is a fish.

The dentary bone, from its symphysis to where it articulated with the angular bone, judging partly from the bone itself and the impression of the remainder on the matrix, has been a little over six inches in length. Its depth at the symphysis has been about two and a quarter inches.

Twelve teeth have occupied the alveolar border in a space of four inches and ten lines, and perhaps a couple more occupied the part broken away behind. The teeth form an unbroken row, close together, and generally differ but little in size, though those posteriorly are a little the smaller.

The perfect crown of the teeth forms a nearly regular cone, the fore and aft diameter of the base slightly exceeding the transverse. It is curved inwardly, pointed, smooth, shining, and even, except at the base, where it is slightly fluted, being most so in the anterior teeth, and more or less feebly so in the hinder ones.

The crown ceases at the alveolar margin, where it becomes continuous with a more robust, solid, oval fang, which is inserted into the jaw and coössified with its alveolus.

In the dentary bone above mentioned, the crown of the first tooth, or that nearest the symphysis, is broken off, displaying a clean continuous disk of vasodentine, nearly circular, and about four lines in diameter. The fang is visible from a destruction of a portion of the bone. It is half an inch long, of greater diameter than the base of the crown, and composed of bone hardly more dense than that of the jaw itself, with which it is coossified. The fourth tooth of the series is in the same condition as the former.

The crown of the second tooth had been shed, and its remaining solid fang is somewhat encroached upon, through absorption, by the fang of the tooth in front.

The third, eighth and twelfth teeth have been shed, and their fangs absorbed, leaving deep oval cavities. These were filled with matrix, and nothing more. It is probable they contained successional teeth, which dropped out in the decomposition of the animal.

The fifth tooth had been shed, and its remaining fang contains a funnel-shaped pit.

The sixth and tenth teeth alone remain in the specimen, the latter entire, the former without its point. The crown of the sixth was nearly eight lines long; the other is seven lines.

The crown of the seventh tooth has been broken off, and the fractured surface displays a small central cavity.

The crown of the ninth tooth, which was smaller than any of the others, is shed, leaving the fang somewhat excavated; but the sides are narrowed, as if the position of the tooth were to have been obliterated to give more room for the accommodation of others.

Back of the tenth tooth there is a small pit, probably the remains of the position of an early tooth smaller than that last indicated. This included would give thirteen to the series.

The crown of the eleventh tooth had been shed, leaving a shallow basin on the top of the fang.

I could find no successional teeth in the specimen. Those which existed appear to have dropped out of the exposed cavities.

From a study of the fragment it would appear as if the germs of new teeth originated in the centre of the preëxisting teeth,—that is, at the conjunction of the crown and fang. In the development of the new tooth it was first accommodated in its growth by the absorption of the fang of the old tooth. The crown of the latter being shed, that of the new one gradually assumed its position, and when protruded its fang became coössified with its alveolus.

A specimen in the museum of the Academy, from Ashley River, S. C., consisting of an isolated tooth with the greater portion of its fang, is larger than any of the teeth in the dentary bone above described. The crown is eight lines long and four and a quarter in diameter at base. The fore and back part of the robust osseous fang present concavities, as portions of cavities remaining after the shedding of teeth with absorption of their fangs.

Of two shed crowns in the museum, from the same locality, one is 5½ lines long by 2¼ and 1¾ in diameter at base ; the other 6¾ lines long by 3¾ and 3½ at base.

The museum of the Academy also contains two specimens consisting of alveolar fragments of jaws with teeth, of the same animal, from Burlington Co., N. J. They were presented by W. J. Taylor, and are reputed to have been obtained from the green sand.

One of the specimens is 2½ inches long, and contains an alternation of teeth and empty cavities for successional teeth. The first cavity is large, the fang formerly occupying its position being completely absorbed. The second tooth of the specimen is entire. Its crown is 7 lines long by 4 and 3½ at base. The third and fifth cavities for successional teeth are not quite so large as the first, nor are the fangs which occupied them so completely absorbed. The fourth tooth has its crown mutilated. Its base behind is irregularly excavated, but whether by erosion, or whether it is the remains of a position occupied by a successional tooth, I cannot determine. In the sixth tooth the crown is not entirely protruded, and its fang is already coössified with a tubular sheath of the fang of the former tooth which occupied its position. In the seventh tooth the crown is shed, but the fang remains with a large cavity. The crown of the eighth tooth was also shed and the fang nearly obliterated through absorption.

The smaller alveolar fragment is 1½ inches long, and contains two teeth, with an intervening cavity for a successional tooth. Before and behind the two teeth are the remains of other cavities.

Though I have an aversion to change names, yet the name *Conosaurus* is so obviously wrong and liable to mislead, especially also as there is a saurian named *Coniosaurus*, that I propose for the former the name of CONOSAUROPS.

I may here take occasion to mention that I have suspected that the tooth represented in figs. 7, 8, 9, pl. xx, of my "Cretaceous Reptiles of the United States," and referred to a carnivorous reptile with the name of *Tomodon*, may also have been a fish. The base of the specimen presents an irregular porous condition, but this I suspect rather to be the result of erosion. As it is unique, I have not been able to obtain a section to examine its microscopic structure. As the name *Tomodon* had been previously appropriated by Duméril for a genus of serpents, I would propose to alter the name applied to the animal to which the fossil belonged, to that of DIPLOTOMODON.

August 18th.

The President, DR. HAYS, in the Chair.

Sixteen members present.

August 25th.

The President, DR. HAYS, in the Chair.

Twenty-three members present.

Messrs. Uselma Smith and B. Waterhouse Hawkins were elected members.

Mr. Ralph Tate, of London, was elected a correspondent.

On favorable report of the Committee, the following paper was ordered to be printed: